

$$E = R^{-6} / (R^{-6} + R_0^{-6})$$

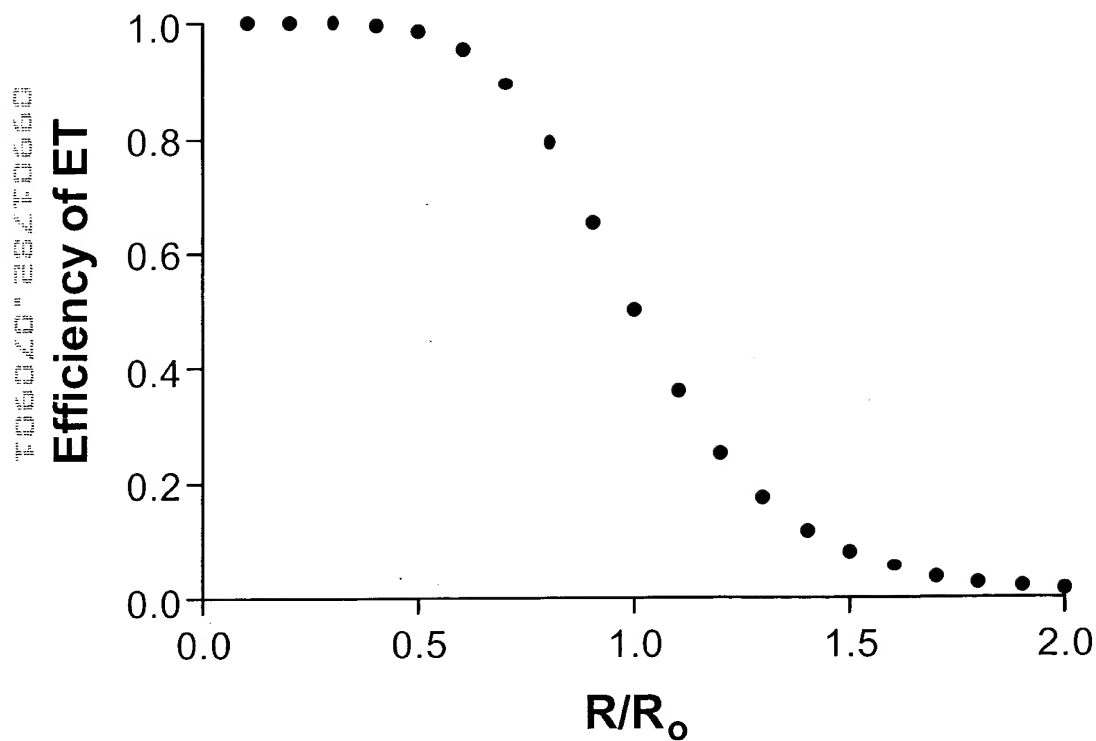


FIG. 1

09004702.070004

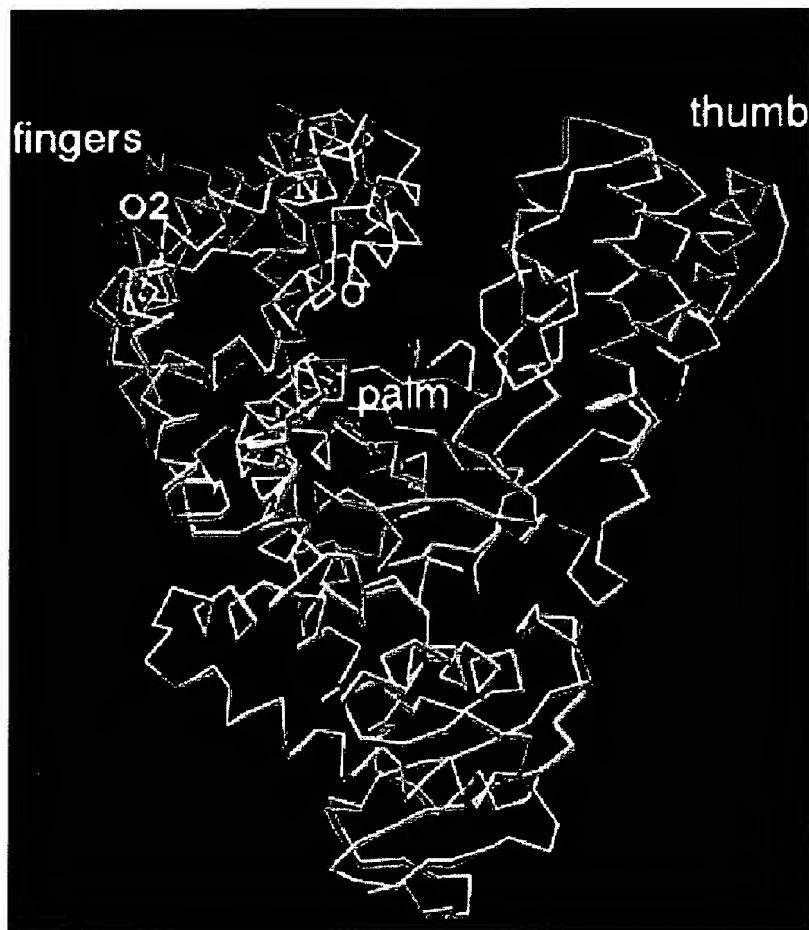


FIG. 2

09901782.070001



FIG. 3A

09901782.070901

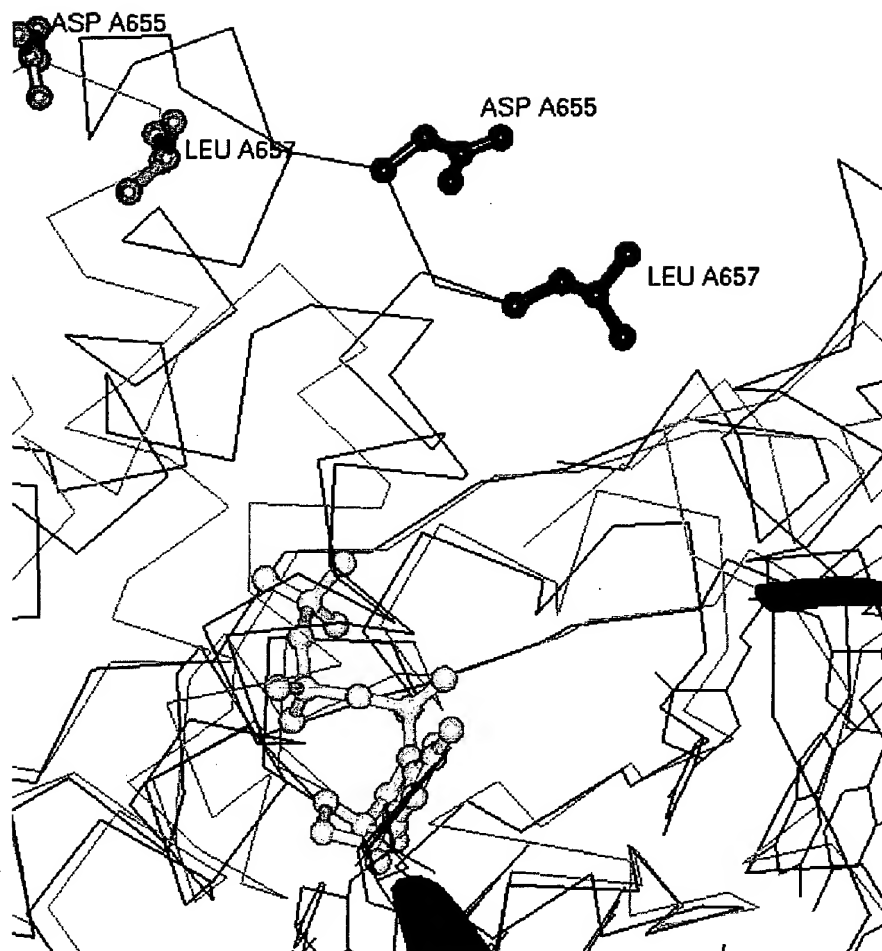
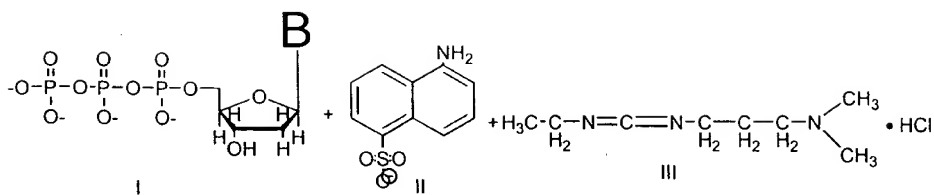


FIG. 3B

09001782.070901

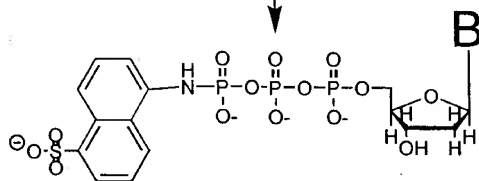


FIG. 3C



B = A, C, T, G

$\text{H}_2\text{O}$ , 22°C, 2.5 hours  
pH: 5.7-5.8



dNTP  $\gamma$ -Am NS

FIG. 4

Primer Strand:

TOP 5' GGT ACT AAG CGG CCG CAT G 3'

Template Strands:

BOT-T 3' CCA TGA TTC GCC GGC GTA CTC 5'  
 BOT-C 3' CCA TGA TTC GCC GGC GTA CCC 5'  
 BOT-G 3' CCA TGA TTC GCC GGC GTA CGC 5'  
 BOT-A 3' CCA TGA TTC GCC GGC GTA CAC 5'  
 BOT-3T 3' CCA TGA TTC GCC GGC GTA CTT TC 5'  
 BOT-Sau 3' CCA TGA TTC GCC GGC GTA CCT AG 5'

Incorporate: GATC AG AAAG  
 (5' to 3')

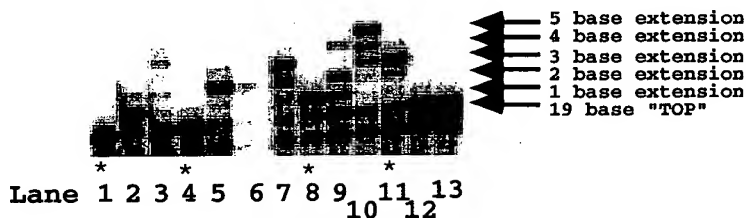
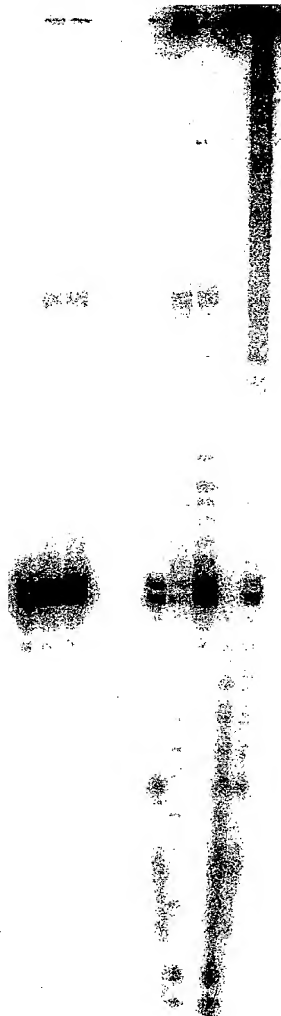


FIG. 5

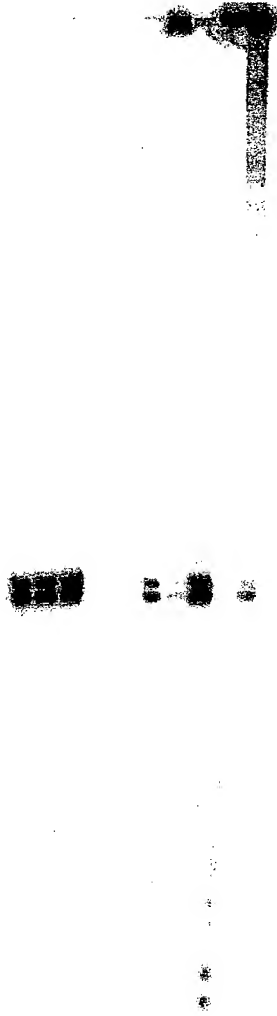
A

1 2 3 4 5 6 7 8



B

1 2 3 4 5 6 7 8



C

1 2 3 4 5 6 7 8

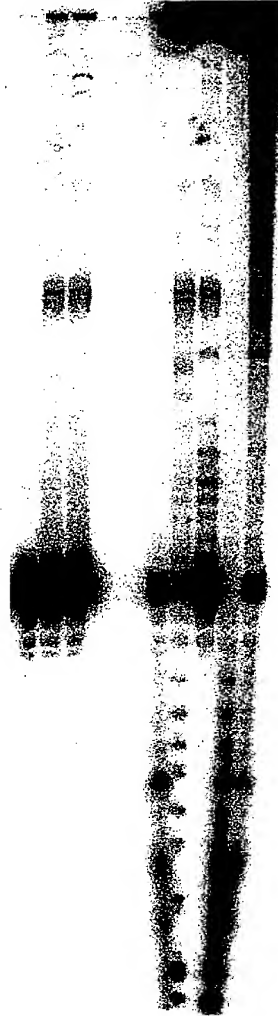


FIG. 6





09904782.070001

		Klenow									Taq	
Enzyme	-	+	+	+	+	+	+	+	+	+	+	+
Primer (TOP)	+	+	+	+	+	+	+	+	+	+	+	+
Template	-	<u>BOT - 3T</u>			<u>BOT - T</u>			<u>BOT - Sau</u>			<u>BOT - 3T</u>	
Nucleotide	-	dG	dA	γA	dG	dA	γA	dG	dA	γA	dA γA	

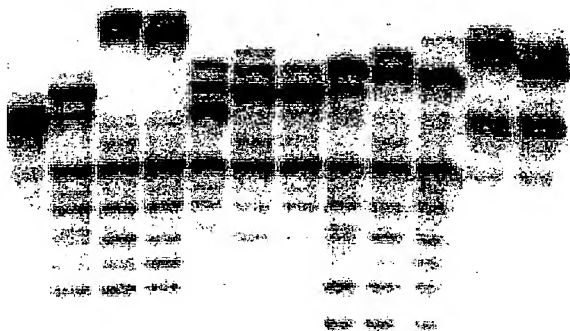


FIG. 8



- Primer Strand:

Top 5' GGT ACT AAG CGG CCG CAT G 3'

- Template Strands:

3T 3' CCA TGA TTC GCC GGC GTA CTT TC 5'

Sau 3' CCA TGA TTC GCC GGC GTA CCT AG 5'

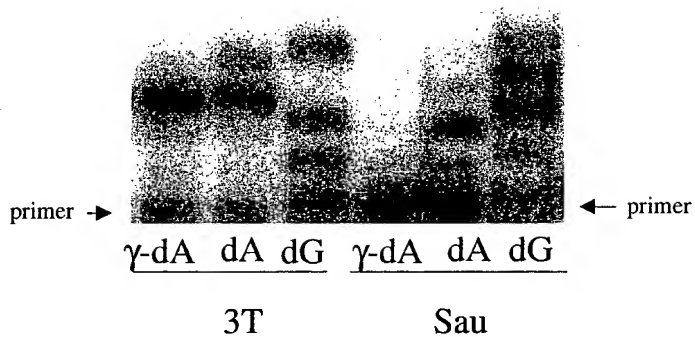


FIG 10

Primer Strand:

Top 5' GGT CT AAG CGG CCG CAT G 3'

Template Strands:

BOT-3T 3' CCA TGA TTC GCC GGC GTA CTT TC 5'  
 BOT-Sau 3' CCA TGA TTC GCC GGC GTA CCT AG 5'

Enzyme:	None	T7	T7	Seq	Seq	T7				Sequenase				Taq		
Primer:	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	
Template:	-	+	-	+		BOT-3T		Sau		BOT-3T		Sau		BOT-3T		
Nucleotide:	-	dA	γdA	dA	γdA	dG	dA	(spill)	γdA	dG	dA	γdAdG	dA	γdAdG	dA	γdA

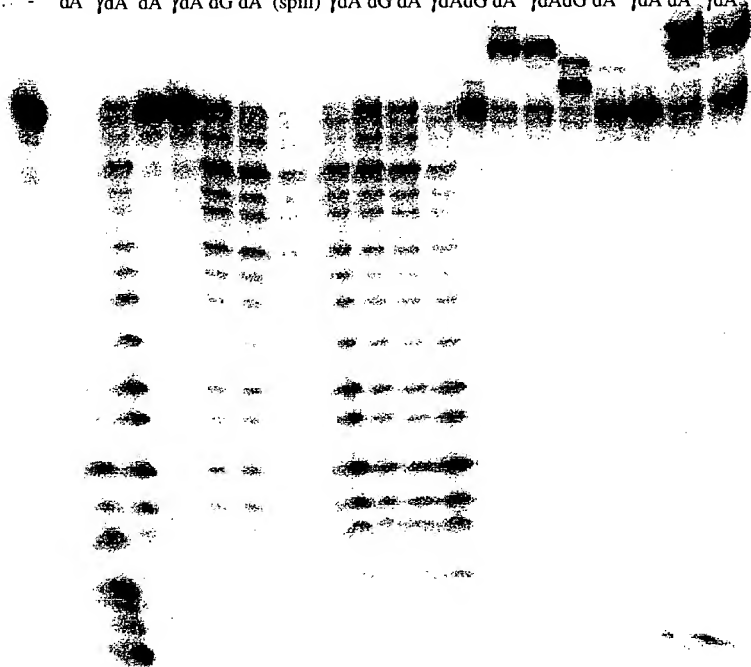
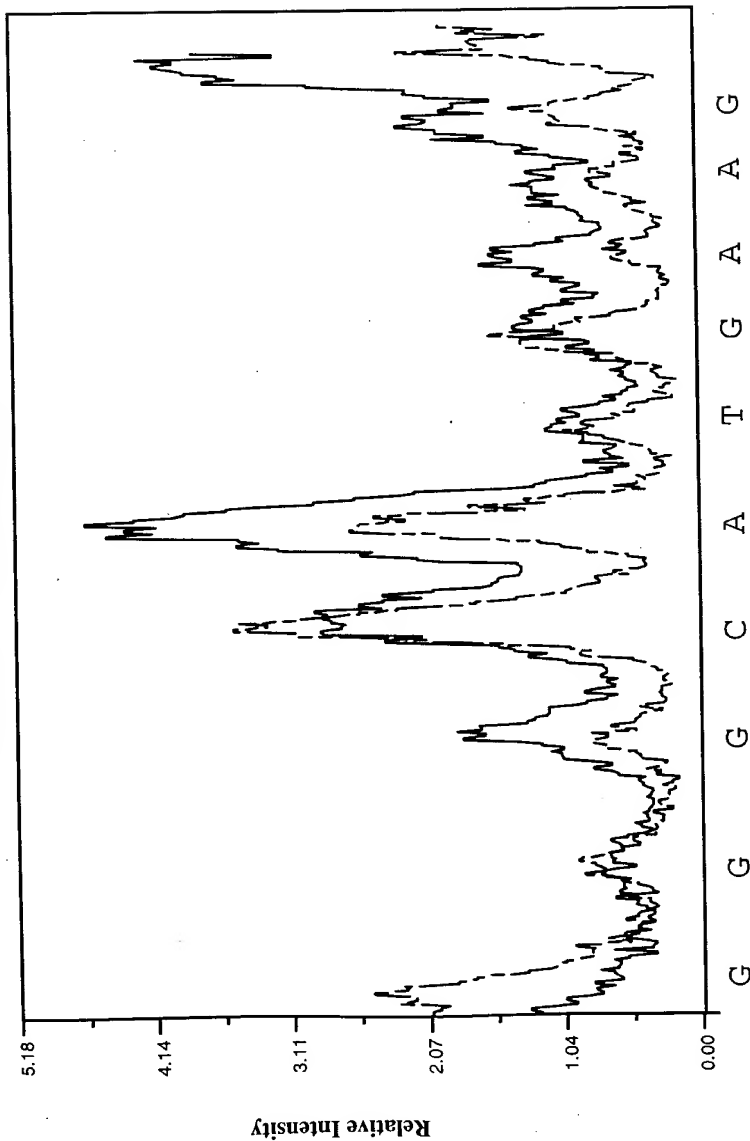


FIG. 11



**Signal Intensity and Reaction Kinetics Provide Information Concerning Base Identity.** Signal intensities for each nucleotide in the extended DNA strand are used to determine, confirm or support base identity data. The solid green line corresponds to reaction products produced when four natural nucleotides (dATP, dCTP, dGTP and dTTP) are included in the synthesis reaction. The dashed red line corresponds to reaction products produced when proprietary, base-modified nucleotides are included in the reaction. As is clearly demonstrated, sequence context and base modification(s) influence reaction product intensity and/or reaction kinetics, and these identifying patterns are incorporated into proprietary base-calling software to provide a high confidence value for base identity at each sequenced position.

FIG 12